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ABSTRACT

Educational reformers have come to recognize that establishing more challenging standards and assessments is not enough to raise student achievement. This brief identifies five challenges that confront educators and policymakers as they develop higher standards and other policies and structures to support improved student and teacher learning. It also describes strategies used by a few states and localities to address some of the challenges. Conducted by the Consortium for Policy Research in Education, the 3-year study examined schools in 3 states taking different approaches to standards-based reform--California, Michigan, and Vermont. The case studies focused on 12 reforming schools located in 6 school districts reputed to be active in educational reform. Interviews were conducted with state policymakers, teacher educators, district and school administrators, and teachers. The findings suggest that: (1) The goals of reform need to strike a balance between current and desired practice, and between old and new practices; (2) greater alignment of state education policy supports reform efforts, but achieving this policy coherence is difficult; (3) deliberate, consistent, and pervasive strategies to ensure equity are necessary if the reforms are to benefit all students; (4) the coherence and continuity of state reform efforts require a stable political environment; and (5) policymakers must develop ways to enhance the capacity of the education system to improve student learning. (Contains six references.) (LMI)

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The Bumpy Road to Education Reform

by Margaret E. Goertz, Robert E. Floden and Jennifer O'Day

At the March 1996 National Education Summit, the nation's governors and business leaders reaffirmed their commitment to the education goals adopted by the governors and then Congress following the Education Summit of 1989.[1] Although participants in the more recent summit downplayed a federal role in education reform, they embraced the use of challenging state and/or locally developed academic standards to improve student performance.

States and many localities have already responded to the call for higher academic standards for students. By 1995, 49 states and several large urban school districts were developing content standards for student learning; at least 31 states were trying to link assessment to these standards (AFT, 1995). However, reformers have come to recognize that more challenging standards and assessments are not enough to raise student achievement. Improved curriculum, better-trained educators and changes in the organization and management of schools are also necessary to facilitate education reform.

This issue of *CPRE Policy Briefs* identifies five challenges that confront educators and policymakers as they develop higher standards and other policies and structures to support improved student and teacher learning. It also describes strategies used by a few states and localities to address some of these challenges.

The brief draws on findings of a three-year study of standards-based reform conducted by CPRE researchers in California, Michigan and Vermont. In each state, researchers conducted case studies of four schools in two districts reputed to be active in reform and capable of supporting education reform. Although the sample is small, the similarity of reform issues across such widely varying fiscal, demographic, and political contexts suggests that lessons learned may be applicable to sites other than those studied here. Overall, we conclude that while states and local school districts have taken major steps to reform the ways they teach and assess their students, the road to reform is arduous, full of bumps and still under construction.

1. *The goals of reform need to strike a balance between current and desired practice, and between old and new practices.*

A basic principle of standards-based reform is that states and local school districts should develop clear and unified visions of what students should know and be able to do. These visions should shape specific policies and provide unambiguous guidance to local teachers and administrators. Each state in our study worked toward that end in the two subject areas of focus—language arts and mathematics. Moreover, these visions were linked to, and shaped by, broader national professional developments, such as the standards-setting activities of the National Council of Teachers of Mathematics (NCTM), the Carnegie Foundation's middle schools initiative, and the National Writing Project.

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We found evidence that teachers in reform districts had moved in the general direction suggested by the visions. In mathematics, problem-solving and communication about mathematics were major areas of emphasis for these teachers, particularly at the elementary school level. In language arts, many of the teachers reported a focus on the process of writing, on understanding and analysis, and on encouraging students to construct meaning from texts.

The new ideas about what students should know and be able to do, how students should be taught and how they should be assessed, however, challenge the conceptions of student learning and teaching that all actors in the education system—students, parents, educators, policymakers and the public—hold dear. While there is strong public support for the concept of higher academic standards, opinion polls indicate that citizens want students to master the basics before moving on to "higher order" skills (Immerwahr & Johnson, 1996). Many people are also uncomfortable with using calculators to teach computation, teaching composition without teaching spelling and grammar, and grouping students of different abilities together.

Even those who support the new directions of reform, such as many of our teacher respondents, expressed the need to balance old and new ways of teaching reading, writing and mathematics. Some teachers suggested that they were hesitant to completely give up some of the content they taught in the past. For example, several teachers in one state indicated that, though they have adopted some version of a process approach to writing, they also saw spelling and grammar as critically important. In mathematics, teachers were balancing an increased emphasis on problem-solving and communication about mathematics with traditional mathematics topics like computation and number facts. Some teachers embraced the integration of content across subject areas, but others did not. While one school in our sample had a project-based curriculum, most taught reading, writing and mathematics as separate disciplines.

Only a bare majority of the public agrees with educators that multiple choice exams should be replaced with essays (Johnson & Immerwahr, 1994). Parental opposition to the content, open-ended format, and lack of "objective" scoring of the California Learning Assessment System (CLAS) contributed to the demise of that state's pioneering assessment program. The revised California assessment will replace performance-based items with a mix of multiple choice, short answer and applied writing skill questions, and the public will participate in the approval of the new tests (Kirst & Mazzeo, 1996).

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2 *Greater alignment of state education policy supports reform efforts, but achieving this policy coherence is difficult.*

Coherence among the elements of state education policy (e.g., alignment of assessment with curricular goals and content) seems to help facilitate reform in districts and schools. This coherence was cited in all three study states—both in terms of the benefits of coherence and the difficulties encountered (particularly by teachers) when it is lacking. One obvious advantage of policy coherence is that it can result in more consistent (and thus stronger) signals to both teachers and students about what is important for teachers to teach and for students to learn. A second potential advantage is that it may allow for more focused and more efficient instruction. For example, if curricular goals and assessments are aligned, teachers do not have to divide their time between teaching a curriculum that stresses certain knowledge and skills on the one hand and preparing students for standardized tests which assess different skills and knowledge on the other. Finally, coherence among the elements of reform could provide additional oppor-

tunities for capacity-building (O'Day, Goertz & Floden, 1995).

All three states in this study have taken major strides in developing a more coherent policy structure, but all face major challenges in developing greater coherence both within curriculum and between curriculum and assessment and in linking teacher professional development with reform activities.

Aligning curriculum across and within grades. Although subject-area reforms cover grades kindergarten through 12, and emphasize articulation across grade levels, this coordination has been difficult to achieve, particularly with the high school. Many of the reform efforts in language arts and mathematics have focused on elementary and middle school teachers, but the structure and content of high school courses have been slow to change. This discontinuity between the middle and high school grades is often aggravated because curriculum development is typically by grade span, involves only teachers in those grade spans, and often occurs in different years. As a result, teachers have little or no knowledge of what is taught or tested at other levels. In Vermont, this disjuncture was aggravated because writing portfolios were required in the eighth grade, but not in the higher grades.

A related issue, emphasized at the elementary level in California, is how to absorb and connect a multiplicity of disciplinary frameworks, especially when a new or revised framework is issued each year. The California State Department of Education has addressed this issue by striving for a consistent and coherent conception of teaching and learning in all of its frameworks and reform documents. It also initiated broader grade-level networks (e.g., the California Alliance for Elementary Education) to provide schools guidance on coordinating and focusing reform efforts. In contrast, Vermont has moved away from single-subject frameworks, opting instead for interdisciplinary frameworks in three fields of knowledge to guide local curriculum development and student assessment.

Aligning curriculum and assessment. The degree to which assessments, which are designed to measure what students know and can do, are aligned with curriculum, which is what students are taught, affects the strength and consistency of signals sent to teachers about the substance and intent of reform. Many of our respondents in California, for example, welcomed the (now defunct) CLAS because it reflected and supported what they were trying to do in their classrooms. Moreover, some pointed out how assessments like CLAS could also be used as a guide for curriculum development at the school and/or district level. New assessment approaches can help develop pedagogical skills, improve instruction among teachers in a school, and enable teachers to recognize student work consistent with the frameworks and understand how such work might be assessed to improve instruction. Where curriculum reform and assessment were not in sync, however, particularly if curriculum had changed but an old test remained in place for accountability, respondents were frustrated and unclear about whether they should teach the new curriculum or teach to the old test, which is often used as an accountability mechanism.

Unfortunately, using the same assessment for accountability and for teacher and system learning may generate its own contradictions. Accountability requires a high degree of reliability. In California, the call for reliable, student-level scores, which CLAS could not produce in the short term, was one factor in the Governor's decision to discontinue the assessment. Vermont's

Methodology

This brief is drawn from *Studies of Education Reform: Systemic Reform*, by Margaret E. Goertz, Robert E. Floden, and Jennifer O'Day. Work on this project was supported by the Office of Educational Research and Improvement (OERI), U. S. Department of Education, and the Carnegie Foundation. The opinions expressed in this publication are those of the authors and are not necessarily shared by CPRE or its funding institutions.

The study findings are based on case studies of 12 reforming schools located in six school districts with reputations as being active in education reform and in three states that are taking somewhat different approaches to standards-based reform—California, Michigan and Vermont. We conducted structured interviews in 1993-94 with state policymakers, teacher educators, and other providers of professional development, and district and school administrators in each of our study sites. We also interviewed five teachers in each of the twelve schools. These teachers also completed a content coverage/instructional strategy questionnaire for the content areas that were the focus of the study—K-8 mathematics and language arts.

Findings of Systemic Reform Study Reported

Studies of Education Reform: Systemic Reform (July 1995) reports results of a three-year study conducted by the Consortium For Policy Research in Education and the National Center for Research on Teacher Learning. The study team reviewed the current literature on systemic reform, commissioned four papers about the preparation and professional development of teachers, and conducted case studies of 12 reforming schools in California, Michigan, and Vermont. Findings are documented in a three-volume technical report.

Volume I: Findings and Conclusions summarizes the literature review and commissioned papers, the study methodology, and the education reform strategies and policies in the three study states. It identifies some common lessons for policymakers who take a standards-based approach to instructional improvement. (168 pp. $17.50)

Volume II: Case Studies contains the 12 case studies. It includes detailed information on state policies, and describes and analyzes reform efforts in the schools and districts studied. (148 pp. $15.00)

Volume III: Technical Appendix—Research Design and Methodology contains a description of the study methodology and copies of the interview protocols and teacher surveys used in the data collection. (102 pp. $10.00)

The three volume set is available at the reduced price of $35.00.

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portfolio assessment system is viewed as a cutting-edge attempt to assess outcomes that are in line with national curriculum reforms, and to enhance teachers' instruction as well as measure student progress. Yet, concern about the reliability of the assessment scores diverted energy away from using the assessment to improve instruction.

Michigan's assessments in mathematics and reading (Michigan Educational Assessment Program, MEAP) are structured to produce reliable individual student scores, and are generally aligned with the content of the state's curriculum goals and with national reforms in the teaching of these subjects. The tests, however, continue to use a traditional multiple choice format that emphasizes getting the correct answer rather than focusing on the process students use to obtain the answer.[2] Thus students can neither demonstrate their ability to communicate about mathematics (one of the NCTM standards) nor show their reasoning on complex problems. Nor can teachers see whether student test performance reflects the standards.

Aligning professional development with reform. Many of the current education reforms require teachers, schools and districts to drastically change the ways they do their work. But the education system has been slow to promote the professional development of teachers and build the organizational capacity of schools and other educational organizations.

For the most part, state- and district-sponsored staff development activities in our study sites, as in most places, were short-term, broad-based efforts to increase teachers' awareness of reforms, their ability to administer or score assessments, or their basic familiarity with new curricula. These activities were generally too short and lacked the follow-up necessary to develop the deep content and pedagogical knowledge necessary to meet new instructional goals. In addition, they did not appear to be building an infrastructure to promote and sustain teacher learning and instructional improvement over the long term.

Of our three study states, only California had incorporated professional development into its reform strategy, supporting several efforts that are directly linked to the systemic reform efforts. Principal among these are the California Subject Matter Projects (CSMPs) and their associated teacher networks. In addition, the state provides professional development money to districts through a variety of programs, including mentor teacher and new teacher programs, the School Improvement Program (SIP), and grants for schools not eligible for SIP. It is not clear, however, whether the resulting activities are aligned with the reforms or of sufficient depth to promote long-term change.

Meanwhile, Michigan and Vermont have chosen to broker professional development and support services provided by outside organizations. Again, such a strategy raises the potential of gen-

erating professional development activities that are disconnected in substance and format from the states' reform visions. In Michigan, for example, the inservice programs vary widely in coverage, scope and quality, and most seem intended to enhance teachers' knowledge of the directions of the reform. But they do not seek to significantly strengthen teachers' knowledge of subject matter or develop pedagogical skills needed for major changes in practice.

In an attempt to foster changes in the structure and quality of professional development by outside providers, the Michigan State Board of Education recently adopted a set of standards to be used in reviewing and approving local district applications for state professional development funds, and in coordinating professional development funding and activities across the state department of education.

3 *Deliberate, consistent, and pervasive strategies to ensure equity are necessary if the reforms are to benefit all students.*

A major goal of standards-based reform is to improve the overall quality of education for *all* children. Yet, while many states specifically mention that their content standards and curriculum frameworks are to apply to all students, they do not uniformly define who "all" students are, leaving to interpretation who should and should not be included with the reform. And an emphasis on higher standards has led some teachers to set higher expectations for high-achieving than for low-achieving students, potentially *increasing* achievement disparities among students (Koretz, et al., 1996).

The sites in our study had developed some strategies to respond to the needs of their diverse student bodies. These included moving away from categorical program structures, targeting resources on low-performing and/or high-minority schools and districts, restructuring schools and restructuring curriculum to promote equity.

Vermont has overhauled the way it funds and regulates services for students with special educational needs. The legislation, Act 230, aims to increase the capacity of schools to develop comprehensive systems to help all children succeed, to the maximum extent possible, in the regular classroom.

Both Michigan and California target some of their grant programs on schools and school districts with large concentrations of low-performing and/or high-minority schools. At the time of our data collection, for example, the California Alliance for Elementary Education had successfully recruited 41 of the state's lowest performing schools into the Alliance. California Subject Matter Projects are seeking to involve teachers from schools serving large numbers of minority and low-income students, and to prepare all participating teachers to meet the needs of diverse populations.

Several districts in our study had adopted, or were in the process of adopting, a middle school philosophy and structure which places emphasis on the whole child and integrated instruction. Some schools implemented multi-age classrooms, eliminated tracking and remedial courses, or adopted project-based instruction in an effort to be more responsive to the diverse social, cultural and educational needs of children in their buildings.

4 *The coherence and continuity of state reform efforts require a stable political environment.*

It takes time for educators to learn new content and approaches and for institutions to change to facilitate new instruction. The experience of our study states demonstrates the importance of developing strategies and mechanisms that allow for consistency over time, even in the face of political and fiscal changes.

In California, the departure of Bill Honig—the architect of California's systemic reform—coupled with political attacks on the state assessment system, and the state's poor showing on national assessments threaten to unravel California's reform efforts.

The threat to standards-based education reform in Michigan comes from an emphasis on choice, charters and deregulation. These approaches are theoretically compatible with standards-based reform, but can divert political attention from work on standards and policy coherence.

The commissioner of education in Vermont enjoyed the support of the governors and legislators of that state, but had to make some "Faustian bargains" with the state legislature. In particular, the legislature wanted a clearer picture of the results for student learning, something that has been impeded by difficulties with developing reliable scoring for the state's portfolio assessment.

Some states and local school districts in our study engaged in concerted public outreach activities to build support for reform. The Commissioner of Education in Vermont and the Vermont State Department of Education spent two years soliciting public input

into the design of that state's vision, the Common Core of Learning. This process included 67 local meetings where Vermont citizens were asked to define what they thought were the most important education goals for the state.

In a district in another study state, the superintendent initiated his reform efforts with the creation of a Visioning Committee composed of community members, teachers and administrators. Initially charged with envisioning what schools should look like in the 21st century, this group now functions as an oversight committee, reviewing and responding to proposed plans for restructuring education in the district.

Mechanisms *outside* the political and bureaucratic system may also help buffer reforms from shifting political winds while broadening the political base for reform. In California, for example, the Subject Matter Projects have developed an independent political base through which they have been able to garner additional funds from the state legislature despite general fiscal retrenchment. Similarly, the Michigan legislature appropriated funds to expand the number and scope of that state's Mathematics and Science Centers, which are major sources of professional development, although it reduced support for the state department of education.

5 *Policymakers must develop ways to enhance the capacity of the education system to improve student learning.*

Capacity-building is a critical element in education reform. Although state policymakers acknowledge this general point, most capacity-building strategies today are too narrow, generally focusing only on changes in individual teachers' knowledge. Moreover, as discussed above, these professional development activities are generally not designed to promote and sustain teacher learning and instructional change over the long term.

Our findings and those of other researchers suggest that policies designed to build capacity must recognize that teacher capacity is multidimensional, encompassing not only teachers' procedural knowledge and skills, but their disposition to meet new standards and to make necessary changes in practice, and their views of themselves as learners. Teachers' abilities to accomplish the goals set out by the new standards are also affected by the formal and informal networks to which they belong, the teaching context—or culture—of their school, and the capacity of their school and school district.

The teachers, schools, school districts, and states in our study used a variety of strategies to build their capacity to support student learning. Actively reforming schools mobilized school staff around clearly articulated, common visions focused on curriculum and instruction, improved achievement for all students, and teacher responsibility for student learning.

Teachers formed communities of practice both inside and outside the school building and the school district. Some of these professional communities were institutionalized, like California's League of Middle Schools, while other groups collaborated on short-term projects, like scoring assessments in Vermont. Reforming schools also benefited from on-going, systemic and focused support by outside individuals or groups of individuals who served as a conduit for new ideas.

Another aspect of capacity-building is expanding available time—time for teachers to collaborate in planning and assessing their instruction; time for teachers and administrators to participate in learning opportunities outside the school; and time for reforms to mature without falling prey to policymakers' readiness to halt reform if student test scores do not rise immediately. Because of fiscal constraints, additional time in our sites was usually derived from some form of restructuring rather than additional monies. Some schools used block scheduling and electives to create common planning periods for staff; some schools restructured the school week to free one-half day a week for school-wide planning and professional development.

Finally, teachers also expressed need for additional personnel and material resources, especially staff to work with students with special needs, and instructional materials that reflect emerging standards. Some of our schools lacked basic resources necessary for effective instruction that many schools take for granted: space for libraries and even classrooms, computers and calculators—even rulers and paper.

A more equitable and purposive allocation of existing resources might remedy many of these shortages. It is also quite possible, however, that helping all children reach more challenging standards may require greater overall financial investment in education and thus greater public commitment to the future.

Conclusion

As demonstrated at the 1996 National Education Summit, educational reformers continue to favor systemic reform elements such as clear standards and alignment of policy tools. Our study of states and districts that have gone in this direction shows that, while these tools do seem to have an effect, changes in practice do not follow quickly or easily from the development and publication of new standards. Many challenges must be overcome before achieving the desired changes in student learning. These challenges include achieving a delicate balance between old goals and new, greater coherence across a wide range of policies and levels of education, maintaining momentum in a rapidly changing political environment, achieving needed increased in the capacity of the education system, and ensuring that the changes benefit all students.

Our study of states and districts at the forefront of reform has uncovered notable variation in how policymakers and practitioners are trying to meet such challenges. The variety of attempted solutions may reflect both human ingenuity and the need to adapt to local circumstances. Others attempting standards-based reform will probably garner helpful ideas from those who have gone before, but even with the best information, they should still expect a bumpy road.

Endnotes

1. These goals address school readiness, high school completion, student competency in nine academic areas, preparation for responsible citizenship and productive employment, school safety, teacher professional development and parental involvement in the schools.

2. The 4th-, 7th-, and 10th-grade MEAP include three open-ended questions in mathematics that can be scored at the discretion of the district. Neither of the sample districts in this study appeared to have availed themselves of this option. The new 11th grade high school proficiency test, which replaced the 10th grade MEAP in 1996, will have fewer multiple choice items and six required constructed response items.

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CPRE Publications Explore Issues Surrounding Systemic Reform

In a recent issue of *CPRE Policy Briefs*, authors Goertz, Floden, and O'Day draw from the same study reported here to explore issues surrounding capacity to change. "Building Capacity for Education Reform" (December 1995) provides a framework for thinking about capacity and suggests ways that systemic reform strategies could help increase the education system's ability to improve.

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